

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A multiple standard communication device of the type with parallel operation, comprising:

a first subunit at least ~~receiving~~ adapted to receive input signals at a predetermined input level in a first receiving mode dedicated to optimum noise performance;

a second subunit at least ~~transmitting~~ adapted to transmit output signals at a specific time, frequency and output level such that ~~said the~~ output level is very large compared to ~~said the~~ input level of said first subunit; and

[wherein] an operation mode modification unit adapted to modify the operation mode of ~~said the~~ first subunit ~~is modified from the first receiving mode to a second receiving mode~~ when ~~said the~~ second subunit is transmitting output signals, the second receiving mode being dedicated to optimum blocking performance. ~~said modification allowing said first subunit to remain fully operational; and~~

~~wherein signal quality of the input signals to be maintained in the presence of the output signals.~~

2. (Currently Amended) The multiple standard communication device of claim 1, wherein ~~said first subunit comprises an~~ the operation mode modification unit is adapted to receive at least one signal specifying at least one of time, frequency, and output level in ~~said the~~ second subunit for operation mode modification in ~~said the~~ first subunit.

3. (Canceled)

4. (Currently Amended) The multiple standard communication device of claim 3 1, wherein ~~said input characteristic of said first subunit is modified~~ the operation mode modification unit is adapted to modify the receiving mode of the first subunit through a low noise amplifier, ~~said low noise amplifier~~ having at least one of at least two operation modes, a tunable filter, a switchable receiver, and an antenna with tunable gain.

5. (Currently Amended) The multiple standard communication device of claim 4, wherein ~~said~~ the low noise amplifier has at least two operation modes and comprises:

a switchable bias network adapted to define at least two biasing conditions of said low noise amplifier; and

a switchable matching network adapted to optimize noise performance, gain and stability of ~~said~~ the low noise amplifier for ~~said~~ the at least two biasing conditions;

wherein a first biasing condition is related to a normal operation mode to optimize noise performance and achieve low current consumption in ~~said~~ the first subunit when no transmit bursts are generated by ~~said~~ the second subunit; and

wherein a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by ~~said~~ the second subunit.

6. (Currently Amended) The multiple standard communication device of claim 5, wherein ~~said~~ the operation mode modification unit is adapted to employ ~~employs~~ at least one signal to activate ~~said~~ the normal operation mode, ~~said~~ the at least one signal comprises at least one of:

at least a signal indicating receiver operation;

a signal to select frequency band and mode;

- at least one signal containing baseband information of ~~said~~ the received signal;
- at least one signal being used to set a specific divider ratio; and
- at least one positioning system S/N measurement signal.

7. (Currently Amended) The multiple standard communication device of claim 5, wherein at least one of control signals and input signals defining a transmitter signal of ~~said~~ the second subunit are employed to activate ~~said~~ the gain adjustment mode.

8. (Currently Amended) The multiple standard communication device of claim 7, wherein at least one control signal comprises at least one of:

- a control signal indicating transmitter operation;
- a control signal adapted to activate an antenna switch in ~~said~~ the transmitter;
- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- a control signals that are used to set a transmitter specific divider ratio.

9. (Currently Amended) The multiple standard communication device of claim 7, wherein ~~said~~ the at least one input signal comprises at least one of:

- at least one input signal including baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- at least one transceiver transmitter signal detected by an RF detector;
- at least one interfering RF-signal received by an antenna of ~~said~~ the first subunit and detected through a further detector.

10. (Canceled)

11. (Currently Amended) A multiple standard communication device of the type with parallel operation, comprising:

a first subunit at least receiving input signals at a predetermined input level;

a second subunit at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit;

wherein an operation mode of said first subunit is modified when said second subunit is transmitting output signals;

said first subunit comprises an operation mode modification unit to receive at least one signal specifying at least one of time, frequency, and output level in said second subunit for operation mode modification in said first subunit;

said operation mode modification unit is adapted to modify an input characteristic of said first subunit;

said input characteristic of said first subunit is modified through a low noise amplifier having at least one of at least two operation modes, a tunable filter, a switchable receiver, and an antenna with tunable gain;

said low noise amplifier has at least two operation modes and comprises:

a switchable bias network adapted to define at least two biasing conditions of said low noise amplifier;

a switchable matching network is adapted to optimize noise performance, gain and stability of said low noise amplifier for said at least two biasing conditions; and

wherein a first biasing condition is related to a normal operation mode to

optimize noise performance and achieve low current consumption in said first subunit when no transmit bursts are generated by said second subunit;

a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by said second subunit; and

said switchable matching network is adapted to define said at least two biasing conditions for an amplification element of said low noise amplifier.

12. (Previously Presented) The multiple standard communication device of claim 11, wherein said operation mode modification unit employs at least one signal to activate said normal operation mode, and wherein said at least one signal comprises at least one of:

at least a signal indicating receiver operation;

a signal to select frequency band and mode;

at least one signal including baseband information of said received signal;

at least one signal being used to set a specific divider ratio; and

at least one positioning system SIN measurement signal.

13. (Previously Presented) The multiple standard communication device of claim 11, wherein at least one of control signals and input signals defining a transmitter signal of said second subunit are employed to activate said gain adjustment mode.

14. (Previously Presented) The multiple standard communication device of claim 13, wherein said at least one control signal comprises at least one of:

a control signal indicating transmitter operation;

a control signal adapted to activate an antenna switch in said transmitter;

- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- at least one control signal that is used to set a transmitter specific divider ratio.

15. (Previously Presented) The multiple standard communication device of claim 13, wherein said at least one input signal comprises at least one of:

- at least one input signal including baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- at least one transceiver transmitter signal detected by an RF-detector;
- at least one interfering RF- signal received by an antenna of said first subunit and detected through a further detector.

16. (Currently Amended) A multiple standard communication device of the type with parallel operation, comprising:

- a first subunit at least receiving input signals at a predetermined input level;
- a second subunit at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit;

wherein an operation mode of said first subunit is modified when said second subunit is transmitting output signals;

wherein said first subunit comprises an operation mode modification unit to receive at least one signal specifying at least one of time, frequency, and output level in said second subunit for operation mode modification in said first subunit, said operation mode modification unit adapted to modify an input characteristic of said first subunit;

wherein said input characteristic of said first subunit is modified through a low noise amplifier having at least one of at least two operation modes, a tunable filter, a switchable receiver, and an antenna with tunable gain; and

wherein said switchable matching network is adapted to define said at least two biasing conditions for an amplification element of said low noise amplifier or said tunable filter is adapted to block said interference signal only when transmit bursts are generated by said second subunit.

17. (Currently Amended) A multiple standard communication device of the type with parallel operation, comprising:

a first subunit at least receiving input signals at a predetermined input level;

a second subunit at least transmitting output signals at a specific time, frequency and output level such that said output level is very large compared to said input level of said first subunit;

wherein an operation mode of said first subunit is modified when said second subunit is transmitting output signals;

wherein said first subunit comprises an operation mode modification unit to receive at least one signal specifying at least one of time, frequency, and output level in said second subunit for operation mode modification in said first subunit, said operation mode modification unit adapted to modify an input characteristic of said first subunit, said input characteristic of said first subunit is modified through a low noise amplifier having at least one of at least two operation modes, a tunable filter, a switchable receiver, and an antenna with tunable gain; and

wherein said switchable receiver comprises:

a first low noise amplifier being directly connected to an antenna adapted to receive a signal for localization and to amplify the position system localization signal;

a second low noise amplifier adapted to amplify the signal for localization; and

a filter connected between said antenna and said second low noise amplifier and adapted to reject blocking signals, and wherein in case a performance of said low noise amplifier is limited due to an interfering signal said second low noise amplifier with said filter connected thereto is activated.

18. (Currently Amended) The multiple standard communication device of claim 17, wherein said low noise amplifier has at least two operation modes and comprises:

a switchable bias network adapted to define at least two biasing conditions of said low noise amplifier; and

a switchable matching network is adapted to optimize noise performance, gain and stability of said low noise amplifier for said at least two biasing conditions;

wherein a first biasing condition is related to a normal operation mode to optimize noise performance and achieve low current consumption in said first subunit when no transmit bursts are generated by said second subunit; and

wherein a second biasing condition is related to a gain adjustment mode to improve blocking performance when transmit bursts are generated by said second subunit.

19. (Previously Presented) The multiple standard communication device of claim 18, wherein said operation mode modification unit employs at least one signal to activate said normal operation mode, said at least one signal comprises at least one of:

at least a signal indicating receiver operation;



- a signal to select frequency band and mode;
- at least one signal containing baseband information of said received signal;
- at least one signal being used to set a specific divider ratio; and
- at least one positioning system S/N measurement signal.

20. (Previously Presented) The multiple standard communication device of claim 18, wherein at least one of control signals and input signals defining a transmitter signal of said second subunit are employed to activate said gain adjustment mode.

21. (Previously Presented) The multiple standard communication device of claim 18, wherein said at least one control signal comprises at least one of:

- a control signal indicating transmitter operation;
- a control signal adapted to activate an antenna in said transmitter;
- a control signal to select frequency band or mode;
- a control signal to set a ramping and power level of a power amplifier; and
- at least one control signal used to set a transmitter specific divider ratio.

22. (Previously Presented) The multiple standard communication device of claim 20, wherein said at least one input signal comprises at least one of:

- at least one input signal including baseband information for transmission;
- a local oscillator input signal in a transmit/receive chain;
- at least one transceiver transmitter signal detected by an RF-detector;
- at least one interfering RF- signal received by an antenna of said first subunit and detected through a further detector.

23. (Previously Presented) The multiple standard communication device of claim 21, wherein said at least one input signal comprises at least one of:

at least one input signal including baseband information for transmission;

a local oscillator input signal in a transmit/receive chain;

transceiver transmitter signals detected by an RF-detector;

at least one interfering RF- signal received by an antenna of said first subunit and detected through a further detector.

24. (Canceled)

25. (Canceled)

26. (Currently Amended) A method of operating a multiple standard communication device of the type with parallel operation, comprising a first subunit at least receiving input signals at a predetermined input level in a first receiving mode dedicated to optimum noise performance and a second subunit at least transmitting output signals at a specific time, frequency and output level such that the output level of the second subunit is very large compared to the input level of the first subunit, comprising the step of:

modifying an operation mode of the first subunit from the first receiving mode to a second receiving mode when the second subunit is transmitting output signals, the second receiving mode being dedicated to optimum blocking performance ~~said modification allowing said first subunit to remain fully operational, and wherein signal quality of the input signals is maintained in the presence of the output signals.~~

27. (Currently Amended) The method of claim 26, wherein ~~said~~ the operation mode of the first subunit is modified in compliance with at least one of time, frequency, and output level in the transmitting second subunit.

28. (Canceled)

29. (Currently Amended) The method of claim ~~28~~ 27, wherein ~~said~~ an input characteristic of the first subunit is modified via a low noise amplifier having at least one of at least two operation modes, a tunable filter, a switchable receiver, and a tunable antenna gain.

30. (Previously Presented) The method of claim 29, wherein operation mode modification is executed using at least one signal to activate a normal operation mode in the second subunit.

31. (Previously Presented) The method of claim 29, wherein at least one of control signals and input signals defining a transmitter signal in the second subunit are employed to initiate the operation mod modification in the first subunit.

32. (Currently Amended) A computer program product directly loadable into an internal memory of a digital computer, comprising software code portions for performing a method of operating a multiple standard communication device of the type with parallel operation, comprising a first subunit at least receiving input signals at a predetermined input level in a first receiving mode dedicated to optimum noise performance and a second subunit at least

transmitting output signals at a specific time, frequency and output level such that ~~said~~ the output level of ~~said~~ the second subunit is very large compared to ~~said~~ the input level of ~~said~~ the first subunit, with a step of:

modifying ~~an~~ the operation mode of ~~said~~ the first subunit from the first receiving mode to a second receiving mode when ~~said~~ the second subunit is transmitting output signals when the computer program product is run on a computer, the second receiving mode being dedicated to optimum blocking performance ~~wherein said modified operation mode allows said first subunit to remain fully operational, and wherein signal quality of the input signals is maintained in the presence of the output signals.~~

33. (Original) The computer program product of claim 32 which is stored on a computer storage medium.

34. (New) The multiple standard communication device of claim 5, wherein the switchable matching network is adapted to define the at least two biasing conditions for an amplification element of the low noise amplifier.

35. (New) The multiple standard communication device of claim 6, wherein the tunable filter is adapted to block the interference signal only when transmit bursts are generated by the second subunit.

36. (New) The multiple standard communication device of claim 4, wherein the switchable receiver comprises:

a first low noise amplifier being directly connected to an antenna adapted to receive a signal for localization and to amplify the position system localization signal;

a second low noise amplifier adapted to amplify the signal for localization; and

a filter connected between the antenna and the second low noise amplifier and adapted to reject blocking signals; and

wherein in case the performance of the first low noise amplifier is limited due to an interfering signal, the second low noise amplifier with the filter connected thereto is activated.

37. (New) The multiple standard communication device of claim 4, wherein antenna characteristics are adapted to enhance blocking performance of the first subunit for shifting the frequency with maximum gain in case the presence of a blocking signal so as to provide additional attenuation for out of band signals.

38. (New) The multiple standard communication device of claim 1, wherein the first subunit is a global positioning system (GPS) receiver and the second subunit outputs two transmission signals according to the dual band mobile communication standard GSM 900/GSM 1900.